

**SEMICONDUCTOR DEVICE AND METHOD FOR ELIMINATION OF RESIST
LINEWIDTH SLIMMING BY FLUORINATION**

ABSTRACT

A semiconductor device (10) includes a photoresist layer (20) for patterning features on the semiconductor device (10) during manufacturing. After the photoresist layer (20) is deposited, the semiconductor device (10) is exposed to fluorine using a fluorination module (126). In one embodiment, the fluorine is applied via a plasma in the fluorination module (126). In other embodiments, the fluorine may be applied in other gaseous or liquid forms. Fluorinating the photoresist layer (20) functions to prevent slimming of the features when dimensions of the features are measured using a scanning electron microscope (SEM).